

AMILO Li Series



We make sure

FUJITSU COMPUTERS
SIEMENS

Are there ...

... any technical problems or other questions you wish to discuss?

Please contact:

- our Hotline/Help Desk (see Help Desk list or visit: ["www.fujitsu-siemens.com/helpdesk"](http://www.fujitsu-siemens.com/helpdesk))
- Your authorised distributor
- Your sales office

Additional information is contained in the Help Desk list and the "Warranty" manual.

You can find the "Warranty" manual on your notebook under *Start symbol – Manual*, on the "Drivers & Utilities" CD/DVD or on our website.

Latest information on our products, tips, updates etc. can be found on our website: ["www.fujitsu-siemens.com"](http://www.fujitsu-siemens.com)

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AMILO Li Series

EasyGuide

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Innovative technology...

and ergonomic design make your AMILO a reliable, convenient notebook.

Your notebook is available in several different versions. Most of the sections in this manual apply to all models – any differences are indicated separately. Some of the illustrations and features in this manual may differ from your model and are for guidance only. The "optional" components described in this manual are only available on some versions of the device and must be selected directly when purchasing. At the time of publication of this manual, it is not yet possible to state whether the "device-specific" components and functions described in this manual are available for your version of the device.

If you have purchased a notebook with a Microsoft Windows operating system, this is pre-installed and optimally configured for you. The notebook is ready to use immediately the first time you switch it on.

Your notebook features the very latest technology so that you get the best performance from your computing experience. Depending on which model you own, you have access to:

- Up to 2 or 4 GB of main memory (RAM). Please contact our Technical Support for information on approved memory modules.
- a CD/DVD burner drive to play DVD movies and record your own CDs/DVDs
- several USB ports which provide easy expansion with webcams, game pads, printers and more
- Integrated LAN or wireless LAN for Internet access
- Integrated audio controller and speakers
- You can even connect a microphone and external loudspeakers to obtain an even better output level.







With the user-friendly "BIOS-Setup-Utility" you can control your notebook's hardware and protect your system better against unauthorised access by using the powerful password properties.

This operating manual tells you how to put your AMILO into operation, and how to operate it in daily use.

Are you missing information?

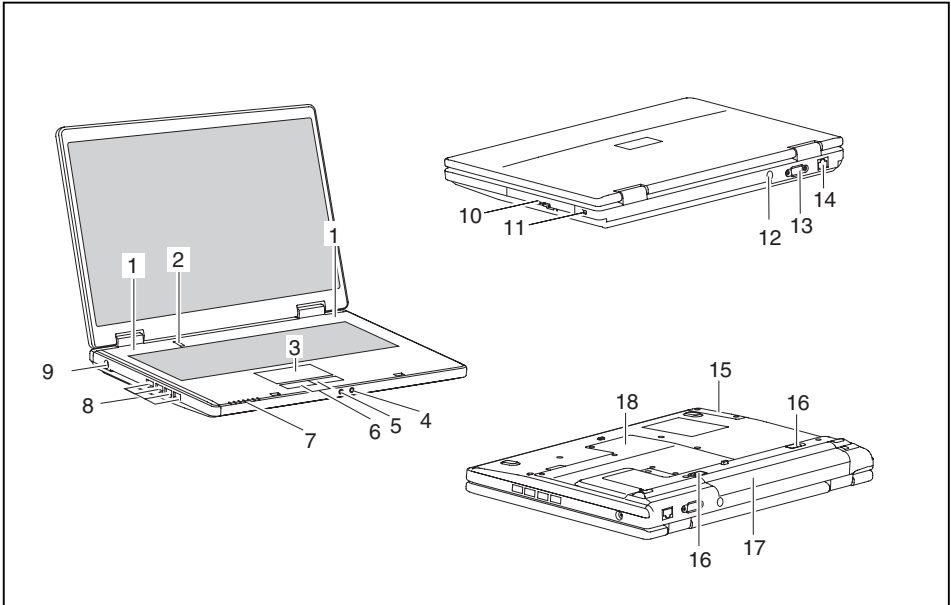
An overview with further information about your notebook can be found in ["Information sources", Page 5](#).

Notational conventions

	Pay particular attention to text marked with this symbol. Failure to observe this warning will endanger your life, will damage the device or lead to loss of data. The warranty will be invalidated if you cause defects in the device through failure to take notice of this warning
	indicates important information that is required to use the device properly.
	indicates an activity that must be performed in the order shown
	indicates a result
This style	flags data entered using the keyboard in a program dialog or command line, e.g. your password (Name123) or a command to launch a program (start.exe)
This style	refers to information displayed by a program on the screen, e.g.: Installation is completed
<i>This style</i>	is for <ul style="list-style-type: none"> terms and texts in a software user interface, e.g.: Click <i>Save</i>. names of programs or files, e.g. <i>Windows</i> or <i>setup.exe</i>.
"This style"	is for <ul style="list-style-type: none"> cross-references to another section, e.g. "Safety information" cross-references to an external source, e.g. a web address: For more information, go to www.fujitsu-siemens.com indicates names of CDs and DVDs as well as names and titles of other materials, e.g.: "CD/DVD Drivers & Utilities" or "Safety" manual
	refers to a key on the keyboard, e.g.: 
This style	flags concepts and text that are emphasised or highlighted, e.g.: Do not switch off device

Ports and controls

This chapter presents the individual hardware components of your notebook. It gives an overview of the displays and connections on the notebook. Please familiarise yourself with these components before you start to work with your notebook.



- 1 = Built-in speakers
- 2 = Notebook ON/OFF switch
- 3 = Touchpad
- 4 = Headphone socket / Line Out
- 5 = Microphone socket / Line In
- 6 = Touchpad buttons
- 7 = Status indicators
- 8 = USB ports
- 9 = DC input jack (DC IN)

- 10 = CD/DVD drive
- 11 = Kensington Lock
- 12 = S-Video out socket
- 13 = Monitor port
- 14 = LAN port
- 15 = Service compartment (hard disk)
- 16 = Battery release latch
- 17 = Battery
- 18 = Service compartment (memory)

Important notes

Here you will find essential safety information regarding your notebook. The other notes provide helpful information on your notebook.

Safety information



Please note the safety information provided in the "Safety" manual and in the safety notes below.

Observe the sections in the manual marked with the symbol on the left.

When connecting and disconnecting cables, observe the relevant notes in this operating manual.

Read the information on the ambient conditions in ["Technical data", Page 55](#) and the chapter ["Using your notebook for the first time", Page 8](#) before preparing your notebook for use and switching it on for the first time.

When cleaning the device, please observe the relevant notes in ["Cleaning the Notebook", Page 7](#).

If you have a notebook with a wireless component, you must also observe the additional safety precautions for devices with wireless components in the "Safety" manual.

Please refer to the notes in the chapter ["Removing and installing components during servicing", Page 44](#).

This notebook complies with the relevant safety regulations for data processing equipment. If you have questions about using your notebook in a particular area, please contact your sales outlet or our Hotline/Help Desk.

Energy saving

Switch the notebook off when it is not in use. Switch off external, connected devices if you are not using them. If you use the energy saving functions, the notebook uses less energy. You will then be able to work for longer before having to recharge the battery.



Energy efficiency is increased and the environmental impact is reduced. You save money while protecting the environment.

Energy saving under Windows

- Make use of the power management features (see ["Using the power-management features", Page 25](#)).

Information sources

This manual contains more detailed instructions and technical information for your notebook.
Manuals available only as PDF files can be printed out if you connect a printer to your notebook.

Information source	Type of information	Where?
Quick Start Guide (printed)	Poster with information about getting started	Accessories kit
"Safety" manual (printed and/or PDF file)	Safety information	Accessories kit and/or on your notebook
"Recovery Process" manual (printed and/or PDF file)	Information on restoring the operating system, drivers, manuals and special software	Accessories kit, on your notebook or on our website at "www.fujitsu-siemens.com/support/"
"EasyGuide" manual (PDF file)	Detailed instructions for startup, operation and technical information	The manuals are located on your notebook under <i>Startsymbol – Manual</i> or in some cases, updated versions can be found on our website at: "www.fujitsu-siemens.com/support/" .
"Warranty" manual (PDF file)	General guarantee conditions	
Information files (e.g. *.TXT, *.DOC, *.CHM, *.HLP)	Information on utilities and programs	
Information files (e.g. *.TXT, *.DOC, *.CHM, *.HLP)	Information about the operating system	In the software for these applications
Information files (e.g. *.TXT, *.DOC, *.CHM, *.HLP) or Windows Vista Help [F1].	Information on Wireless LAN	In the Wireless LAN router software / application from your Internet provider or Windows Vista Help [F1].

Travelling with your notebook

Please observe the points listed below when travelling with your notebook.

Before you travel

- ▶ Back up important data stored on your hard disk.
- ▶ Switch off the radio component for data security reasons. With data traffic via a wireless connection, it is also possible for unauthorised third parties to receive data.



Information on activating data encryption is provided in the documentation for your radio component.

- ▶ If you wish to use your notebook during a flight, first check with the flight attendants if it is OK to do so.

When travelling in other countries

- ▶ If you are travelling abroad, check that the mains adapter can be operated with the local mains voltage. If this is not the case, obtain the appropriate mains adapter for your notebook. Do not use any other voltage converter!
- ▶ Check whether the local power supply and the specifications of the power cable are compatible. If this is not the case, buy a power cable that matches the local conditions. Do not use a connection adapter for electrical devices to connect the notebook.
- ▶ Enquire with the corresponding government office of the country you will be travelling in as to whether you may operate the radio component integrated in your notebook there (see also ["CE marking", Page 58](#)).
- ▶ If you are planning to use a modem, please be aware that it may not necessarily be compatible with the local telephone system. This may result in poor performance, or the modem may not work at all. You may require a country-specific telephone adapter (available as an optional accessory).

Transporting the Notebook



Protect the notebook from severe shocks and extreme temperatures (e.g. direct sunlight in a car).

- ▶ Remove all disks (e.g. CD, DVD) from the drives.
- ▶ Switch the notebook off.
- ▶ Unplug the mains adapter and all external devices from the power socket.
- ▶ Disconnect the mains adapter cable and the data cables for all external devices.
- ▶ Close the LCD screen so that it locks into place.
- ▶ To protect against damaging jolts and bumps, use a notebook carrying case to transport your notebook.

Cleaning the Notebook



Do not clean any interior parts yourself; leave this job to a service technician.

Only use cleaning products designed for computers. Normal household cleaners and polishes can damage the markings on the keyboard and the device, the paintwork or the notebook itself.

Ensure that no liquid enters the notebook.

The Crystal View display is very sensitive to scratching! Only clean the display surface with a very soft, slightly damp cloth.

- ▶ Switch the notebook off.
- ▶ Unplug the mains plug of the mains adapter from the mains socket.
- ▶ Remove the battery (see ["Removing the battery", Page 24](#)).
- ↳ Wipe the casing with a dry cloth. If particularly dirty, use a cloth which has been moistened in mild domestic detergent and then carefully wrung out.
To clean the keyboard and the touchpad, you can use disinfectant wipes.

Using your notebook for the first time



Please read the chapter entitled ["Important notes", Page 4](#).

Before you can use your notebook for the first time you need to charge the battery and install the supplied software. The Windows operating system and drivers required are already pre-installed.

Upon delivery, the battery can be found in the battery compartment or in the accessories kit. The battery must be charged if you want to operate your notebook with the battery.

When not plugged into a mains outlet, the notebook runs on its built-in battery. You can increase the battery's life by enabling the system's energy saving functions.

When you use your notebook in your home or office, we recommend you use the mains adapter instead of the battery.

Please read the chapter entitled ["Connecting external devices", Page 37](#) for instructions on how to connect devices such as a mouse and a printer to the notebook.

Unpacking and checking your notebook



Should you discover any damage incurred during transportation, notify your local sales outlet immediately!

- ▶ Unpack all the individual parts.
- ▶ Check your notebook for damage incurred during transportation.



We recommend that you keep the original packaging material.

You may need the packaging in the future if you need to transport your device.

Selecting the location



Select a suitable location for the notebook before setting it up. Consider the following points when selecting a location:

- Never place the notebook on a soft surface (e.g. carpeting, upholstered furniture, bed). This can block the air vents and cause damage due to overheating.
- Do not place the notebook directly on your legs for extended periods. The underside of the notebook heats up during normal operation. Extended contact with the skin can become unpleasant or even result in burns.
- Place the notebook on a stable, flat, non-slip surface. Please note that the rubber feet may mark certain types of surfaces.
- Keep other objects 100 mm away from the notebook and its mains adapter to ensure adequate ventilation.
- Never cover the ventilation slots on the notebook or the mains adapter.
- Do not expose the notebook to extreme environmental conditions. Protect the notebook against dust, humidity and heat.

Connecting the power adapter



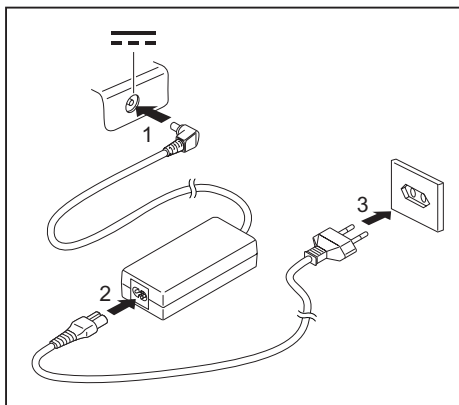
Two different mains adapters are available for this computer. Use only the mains adapter supplied with your computer.

Please refer to the instructions in ["Safety information", Page 4](#).

The power cable supplied conforms to the requirements of the country in which you purchased your notebook. Make sure that the power cable is approved for use in the country in which you intend to use it.

The mains adapter's power cable must only be connected to a mains socket if the notebook is connected to the mains adapter.

Make sure that the rated current of the mains adapter is not higher than that of the power system to which you connect the mains adapter (see section "Technical data", ["Mains adaptor 65W or 90W", Page 56](#)).



- Connect the mains adapter cable (1) to the DC jack (DC IN) on the notebook.
- Plug the power cable (2) into the mains adapter.
- Plug the power cable (3) into a mains outlet.

Switching the notebook on for the first time



When you switch your notebook on for the first time, the supplied software is installed and configured. Due to the fact that this installation procedure must not be interrupted, you should set aside enough time for it to be fully completed and connect the notebook to the mains outlet using the mains adapter.

During installation, the notebook must only be rebooted when you are requested to do so!

Your operating system is pre-installed on the hard disk to facilitate the procedure when you use your notebook for the first time.

- ▶ Switch the notebook on (see ["Switching on the Notebook", Page 11](#)).
- ▶ During installation, follow the on-screen instructions.
- ↳ Consult the operating system manual if anything is unclear about the requested input data.



If a Windows operating system is installed on your notebook, you will find additional information on the system as well as the drivers, help programs, updates, manuals, etc. on your notebook or on the "Drivers & Utilities" CD/DVD or on our website (see ["Information sources", Page 5](#)).

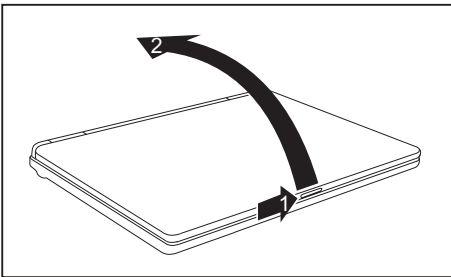
Working with the notebook

This chapter describes the basics for operating your notebook. Please refer to ["Connecting external devices", Page 37](#) for instructions on how to connect external devices such as a mouse and a printer to the notebook.

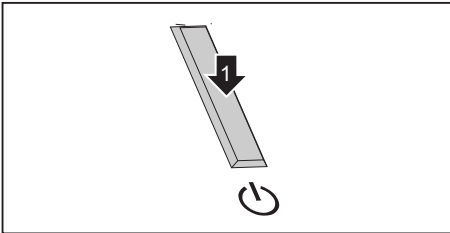


Refer to the information in chapter ["Important notes", Page 4](#).

Switching on the Notebook



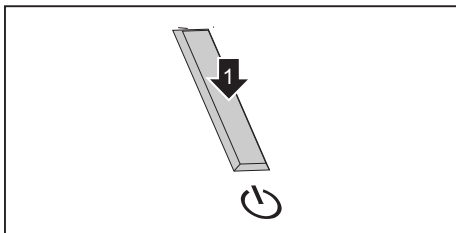
- Slide the release button in the direction of the arrow (1) and unfold the LCD screen upward (2).



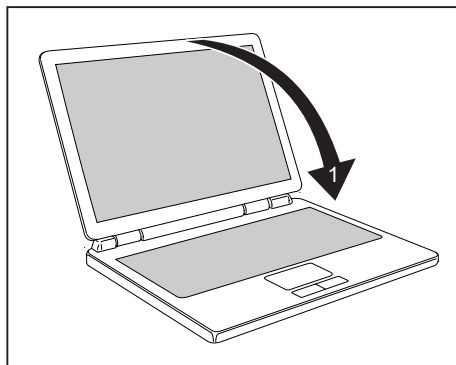
- Press the ON/OFF switch (1) to switch the notebook on.

↳ The power-on indicator is lit.

Switching off the Notebook



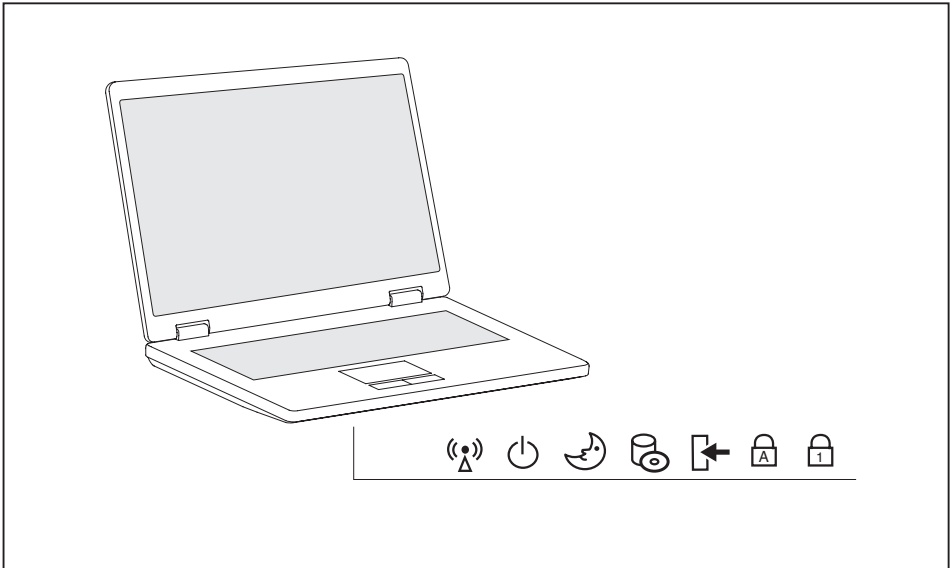
- ▶ Shut down the operating system properly (in Windows via the *Start* menu by clicking *Start – Shut Down – Shut Down – OK*).
- ▶ If the notebook is not switched off automatically, press the ON/OFF switch (1) for approx. five seconds.



- ▶ Close the LCD screen (1) until you feel it click and engage.

Status indicators

The status indicators provide information about the status of the power supply, the drives and the keyboard functions. These indicators are also visible with the notebook closed.



Wireless LAN indicator



Power indicator



Standby indicator



Drive indicator



Battery indicator



Caps Lock indicator



Num Lock indicator



Wireless LAN indicator

- Indicator lights up: The wireless LAN module is switched on.
- Indicator is off: The wireless LAN module is switched off.



Power indicator

- Indicator lights up: The notebook is switched on.
- Indicator is off: The notebook is switched off.



Standby indicator

- Indicator lights up: The notebook is in standby mode.



Drive indicator

- Indicator lights up: One of the drives (e.g. hard disk, CD/DVD) is being accessed.



Battery indicator

The charging state of the battery is shown by the battery indicator.

- Indicator lights up: The battery is fully charged.
- Indicator flashes: The battery is charging.
- Indicator is off: The battery is flat.



Caps Lock indicator

- Indicator lights up: The Caps Lock key has been pressed.

All the characters you type appear in upper case. In the case of overlay keys, the character printed on the upper left of the key appears when that key is pressed.



Num Lock indicator

- Indicator lights up: The Num key has been pressed.

The numbers on the upper right of keys in the integrated numeric keypad are enabled.

Keyboard



The keyboard of your notebook is subject to continuous wear through normal use. The key markings are especially prone to wear. The key markings are liable to wear away over the life of the notebook.

The keyboard has been designed to provide all the functions of an enhanced keyboard. Some enhanced keyboard functions are mapped with key combinations.

The following description of keys refers to Windows. Additional functions supported by the keys are described in the relevant manuals supplied with your application programs.

The figure below shows how to access the different characters on keys with overlaid functions. The example applies when the Caps Lock indicator is not lit.

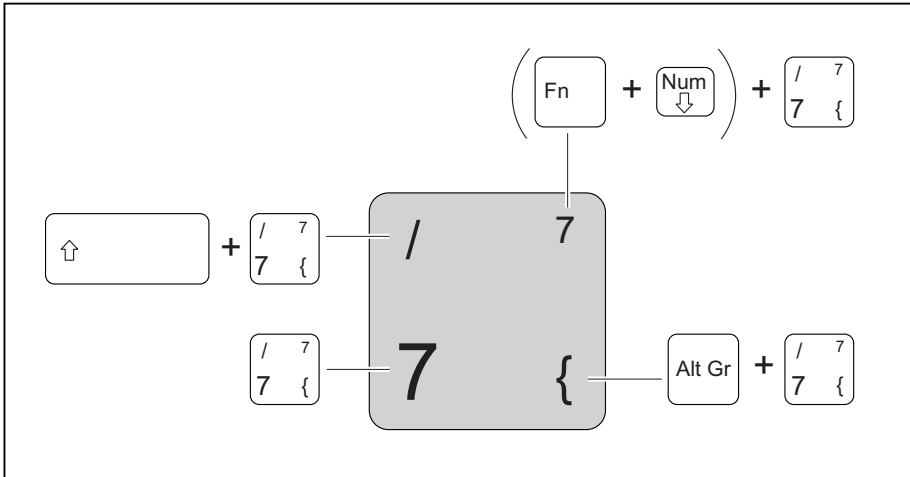
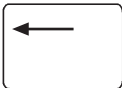
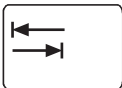


Illustration (general example of German keyboard layout)



Backspace key

The Backspace key deletes the character to the left of the cursor.



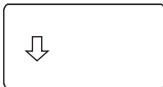
Tab key

The Tab key moves the cursor to the next tab stop.



Enter key (return)

The Enter key terminates a command line. The command you have entered is executed when you press this key.



Caps Lock key

The Caps Lock key activates uppercase mode (CapsLK indicator lit). The Caps Lock function causes all the characters you type to appear in uppercase. In the case of overlay keys, the character printed on the upper left of the key appears when that key is pressed. To cancel the Caps Lock function, simply press the Caps Lock key again.



Shift key

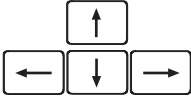
The Shift key causes uppercase characters to appear. In the case of overlay keys, the character printed on the upper left of the key appears when that key is pressed.



Fn button

The **Fn** key enables the special functions indicated on overlay keys (see ["Key combination", Page 17](#)).

If the external keyboard does not feature a **Fn** key, you can simultaneously press the **Ctrl** + **Alt** keys instead.



Cursor keys

The cursor keys move the cursor in the direction of the arrow, i.e. up, down, left, or right.



Pause key

The **Pause** key temporarily suspends the screen output. Output resumes when you press any other key.



Start key

The Start key opens the Windows Start menu.



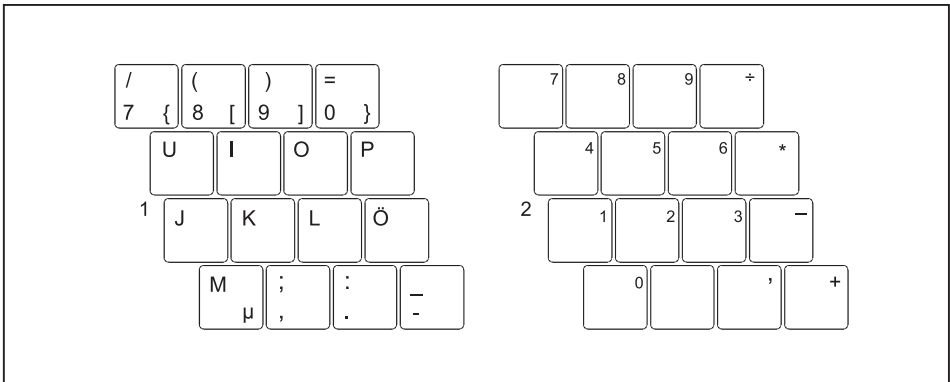
Menu key

The Menu key opens the menu for the selected item.

Virtual numeric keypad

The keyboard on your notebook does not have a separate numeric keypad. To provide the convenience of a numeric keypad your keyboard is equipped with a virtual numeric keypad. The special keys for the virtual numeric keypad are recognisable by the numbers and symbols printed in the upper right corner of each key. If you have switched on the virtual numeric keypad you can type the characters shown on the upper right of the keys.

Illustration (example of German keyboard layout):



1 = Characters enabled when Num Lock indicator is not lit

2 = Characters enabled when Num Lock indicator is lit

Further information relating to the status indicator can be found in the ["Status indicators", Page 13](#) chapter.

Key combination

The following description of key combinations refers to functions when using Microsoft Windows. Some of the following key combinations may not function in other operating systems and with some device drivers.

Other key combinations are described in the relevant manuals supplied with your application programs.

Key combinations are performed as follows:

- ▶ Press and hold the first key in the combination.
- ▶ While holding the first key down, press the other key or keys in the combination.

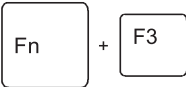


If the external keyboard does not feature a **Fn** key, you can simultaneously press the **Ctrl** + **Alt** keys instead.



Wireless LAN: on/off

You can use this key combination to switch the Wireless LAN module on and off.



Enabling/muting loudspeakers

This key combination switches your notebook's loudspeaker off (mute) and on.



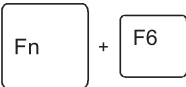
Decrease volume

This key combination reduces the volume of the integrated loudspeakers.



Increase volume

This key combination increases the volume of the integrated loudspeakers.



Switch touchpad ON/OFF

This key combination switches your notebook's touchpad on and off.



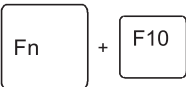
Decrease screen brightness

This key combination decreases the brightness of the screen.



Increase screen brightness

This key combination increases the brightness of the screen.

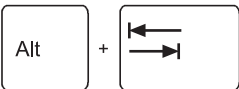
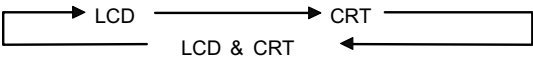


Toggle output screen

Use this key combination to select which screen(s) is/are used for display if an external monitor is connected.

You can opt to use:

- just the notebook's LCD screen (LCD)
- just the external monitor (CRT)
- both the LCD on the notebook and the CRT screen on the external monitor (LCD & CRT)



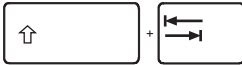
Switching between open applications

With this key combination you can switch between several open applications.



Carrying out a warm boot

This key combination triggers a reset and reboots the notebook. First hold down the **Ctrl** and **Alt** keys and then press the **Del** key. First the Task Manager is displayed. You must then press all three keys again to reboot.



Backtab

This key combination moves the cursor back to the previous tabular stop.



Key combinations with the Windows keys are contained in the manual for your operating system.

Country and keyboard settings

If you want to change the country and keyboard settings, proceed as follows:

- Enter the settings by clicking *Start – (Settings) – Control Panel – Time, Regional and Language Options*.

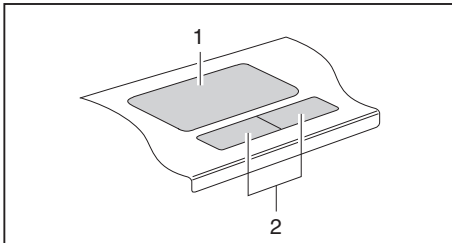
Touchpad and touchpad buttons



Keep the touchpad clean. Protect it from dirt, liquids, and grease.

Do not use the touchpad if your fingers are dirty.

Do not rest heavy objects (e.g. books) on the touchpad or the touchpad buttons.



1 = Touchpad

2 = Touchpad buttons

The touchpad enables you to move the mouse pointer on the screen.

The touchpad buttons allow you to select and execute commands. They correspond to the buttons on a conventional mouse.

Using touchpad buttons

Moving the pointer

- ▶ Move your finger on the touchpad.
- ↳ The pointer will move accordingly.

Selecting an item

- ▶ Move the pointer to the item you wish to select.
- ▶ Tap the touchpad once or press the left button once.
- ↳ The item is selected.

Executing a command

- ▶ Move the pointer to the field you wish to select.
- ▶ Tap the touchpad twice or press the left button twice.
- ↳ The command is executed.

Dragging an item

- ▶ Select the desired item.
- ▶ Press and hold the left button and drag the item to the desired position with the finger on the touchpad.
- ↳ The item will be moved.

LCD screen

Information on the LCD screen

High-quality TFT displays are installed in notebooks from Fujitsu Siemens Computers GmbH. For technical reasons, TFT monitors are manufactured for a specific resolution. An optimal, clear picture can only be ensured in the resolution intended for the particular TFT monitor. A monitor resolution which differs from the specification can result in an unclear picture.

The monitor resolution is understood to be the number of horizontal and vertical pixels (i.e. "picture elements") which make up the monitor display. For example, "WUXGA" stands for 1920 x 1200 pixels. Each pixel consists of three so-called subpixels of the colours red, green and blue. As a result, a WUXGA monitor consists of $1920 \times 1200 \times 3 = 6,912,000$ subpixels.

Frequently used monitor resolutions	Number of pixels
XGA	1024 x 768
WXGA	1280 x 800
SXGA	1280 x 1024
SXGA+	1400 x 1050
WXGA+	1440 x 900
UXGA	1600 x 1200
WSXGA	1680 x 1050
WUXGA	1920 x 1200

The screen resolution of the LCD screen of your notebook is optimally set at the factory.

Permanently unlit or lit pixels

The standard of production techniques today cannot guarantee an absolutely fault-free screen display. A few isolated constant lit or unlit pixels may be present. The maximum permitted number of pixels faults is stipulated in the stringent international standard ISO 13406-2 (Class II).

Example:

A 15" LCD screen monitor with a resolution of 1024 x 768 has $1024 \times 768 = 786432$ pixels. Each pixel consists of three subpixels (red, green and blue), so there are almost 2.4 million subpixels in total. According to ISO 13406-2 (Class II), a maximum of 4 pixels and 5 subpixels may be defective, i.e. a total of 17 faulted subpixels. That is approx. 0.0007 % of the entire subpixel!

Background lighting

TFT monitors are operated with background lighting. The luminosity of the background lighting can decrease during the period of use of the notebook. However, you can set the brightness of your monitor individually.

Screen settings

Setting the resolution

The screen resolution of the LCD screen of your notebook is optimally set at the factory.

Changing the font size

You can choose between a larger and a smaller font.

- ▶ Right-click on the desktop. Enter your settings by clicking *Personalization – Adjust Font Size (DPI)* (in the left pane) – *Continue*.

or

- ▶ Enter your settings by clicking *Start – (Settings) – Control Panel – Appearance and Personalization – Personalization – Adjust Font Size (DPI)* (in the left pane) – *Continue*.

Synchronising the display on the LCD screen and an external monitor

Your notebook supports simultaneous display on the LCD screen and an external monitor. Using the corresponding Fn/key combinations, you can toggle between the different screen output options (see "[Key combination](#)", [Page 17](#), section "Toggle output screen").

You will find information on connecting an external monitor in the chapter "[Connecting an external monitor](#)", [Page 39](#).

Battery

The battery is one of the most important components of your notebook. When not plugged into a mains socket, the notebook runs on its built-in battery. You can increase the life of the battery by caring for the battery properly. The average battery life is around 500 charge/discharge cycles.

You can extend the battery life by taking advantage of the available energy saving functions.



You can increase the time for which your notebook will operate under battery power. We therefore recommend that while operating under battery power, you should switch off the *Windows Vista Aero* graphics user interface.

- ▶ Select *Startsymbol – (Settings) – Control Panel– Appearance and Personalization – Screen colour and appearance – Open the Properties for Classical Appearance to set further options and select – Basic Windows Vista – or – Standard Windows – or – Classic Windows – to switch off Windows Vista Aero*.

Charging, caring for and maintaining the battery

The notebook battery can only be charged, when the ambient temperature is between 5°C and max. 35°C.

You can charge the battery by connecting the notebook to the power adapter (see ["Connecting the power adapter", Page 9](#)).

You can maintain long life from your battery by allowing it to discharge fully before you recharge it again. To do this, leave your notebook turned on when it is operated with the battery. Once the battery is running low you will hear a warning alarm. If you do not connect the mains adapter within five minutes of the warning alarm described above, your notebook will automatically switch off.

Information on the battery charging time can be found in ["Technical data", Page 55](#).

Monitoring the battery charging level

Windows also has a "Battery status meter" in the taskbar for monitoring the battery capacity. When you place the mouse pointer on the battery symbol, the system displays the battery status.

Battery: storing

Keep the battery pack between 0 °C and +30 °C (32 and 122 degrees Fahrenheit). The lower the temperature at which the batteries are stored, the lower the rate of self-discharge.

If you will be storing batteries for a longer period (more than two months), the battery charge level should be approx. 30 %. To prevent exhaustive discharge, check the charging level of the battery at regular intervals.

To be able to make use of the optimal charging capacity of the batteries, the battery should be completely discharged and then fully recharged.



If you do not use the batteries for long periods, remove them from the notebook. Never store the batteries in the device.

Removing and installing the battery



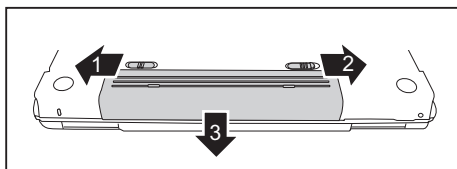
Only use batteries approved by Fujitsu Siemens Computers for your notebook.

Never use force when inserting or removing a battery.

Make sure that no foreign bodies get into the battery connections.

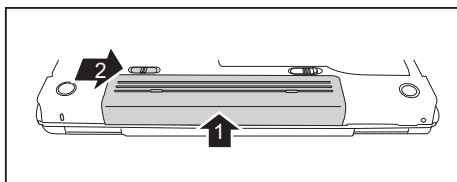
Removing the battery

- ▶ Switch the notebook off and pull the power plug out of the mains socket.
- ▶ Close the LCD screen so that it locks into place.
- ▶ Disconnect all cables connected to the notebook.
- ▶ Turn your notebook over and place it on a stable, sturdy, flat surface. If necessary, lay an anti-slip cloth on this surface to prevent the notebook from being scratched.



- ▶ Push the battery lock in direction of the arrow (1).
- ▶ Slide the battery release (2) in the direction of the arrow and hold it in place.
- ▶ Remove the battery from the battery compartment (3).

Inserting the battery



- ▶ Push the battery into the battery compartment until it engages (1).
- ▶ Push the battery lock in direction of the arrow (2).

Using the power-management features

The notebook uses less power when the available power-management features are used. You will then be able to work longer when using the battery before having to recharge it.



Power efficiency is increased and environmental pollution reduced. By choosing the best power options, you can make significant savings and at the same time help protect the environment.

When you close the lid, the notebook automatically enters a power saving mode. In Windows, *Hibernate* is activated by default.

We currently recommend the following settings:

These settings are based on practical experience and may therefore differ from the default settings of the preinstalled software and from Windows.

Function	On external power	On battery power
Turn off monitor	After 10 minutes	After 5 minutes
Turn off hard disk(s)	After 15 minutes	After 10 minutes
Energy saving (S3)	After 20 minutes	After 15 minutes
Hibernate mode (S4)	After 1 hour	After 30 minutes

- ▶ Activate the power-management features with *Start – (Settings) – Control Panel – Mobile PC – Power Options*.
- ▶ Activate the screen saver by clicking *Start – (Settings) – Control Panel – Appearance and Personalization – Personalization – Change screen saver*.

or

- ▶ Right-click on the desktop. Switch on the screen saver by clicking *Personalization – Change screen saver*.



If you need further information about an option, you can get help with most settings by pressing **F1** to open the Microsoft Help.

If your notebook is in a power saving mode, be sure to remember the following:



During power saving mode, open files are held in the main memory, in the cache or in a swap file on the hard disk.

Never turn off your notebook while it is in a power saving mode. If the built-in battery is nearly flat, close the open files and do not go into power saving mode.

Switch the notebook off:

- To connect external devices
- To disconnect external devices from the notebook
- To change the memory expansion

If you do not intend to use your notebook for a long period of time:

- ▶ Exit power saving mode if necessary via the mouse or keyboard or by switching on the notebook.
- ▶ Close all opened programs and switch the notebook off.

Hard disk

The hard disk is the most important storage medium of your notebook. You can work considerably faster and more efficiently if you copy applications and files from CDs/DVDs to your hard disk.

When the hard disk is accessed, the drive indicator lights up.

CD/DVD

CD/DVD data storage media (device dependent)

CD/DVD drives can either only read or both read and write different CDs or DVDs. The meaning of the respective CD and DVD types is described in the following:

CD-ROM

Abbreviation for Compact Disc - Read Only Memory. A CD-ROM is an optical data storage medium that can contain a maximum of 700 Mbytes. These data cannot be changed.

CD-R

Abbreviation for Compact Disc Recordable. A CD-R is an optical data storage medium that can only be written once with a maximum of 700 Mbytes of data. Then these data cannot be changed, but can be read as often as desired.

CD-RW

Abbreviation for Compact Disc ReWriteable. A CD-RW is an optical data storage medium that can be written with a maximum of 700 MByte of data a virtually unlimited number of times. This means the data can be deleted and changed.

DVD (DVD-ROM and DVD video)

Abbreviation for Digital Versatile Disc or Digital Video Disc. A DVD is an optical data storage medium that can contain a maximum of 17 GBytes of data. These data cannot be changed.

DVD+R/DVD-R

Abbreviation for Digital Versatile Disc Recordable or Digital Video Disc Recordable. A DVD+R or a DVD-R is an optical data storage medium that can only be written once with a maximum of 4.7 Gbytes of data. Then these data cannot be changed, but can be read as often as desired.



DVD+R and DVD-R are different standards. DVD+Rs and DVD-Rs can only be written by drives which support the respective standard.

DVD+RW/DVD-RW

Abbreviation for Digital Versatile Disc or Digital Video Disc ReWriteable. A DVD+RW or a DVD-RW is an optical data storage medium that can be written with a maximum of 4.7 GBytes of data virtually an unlimited number of times. This means the data can be deleted and changed.



DVD+RW and DVD-RW are different standards. DVD+RWs and DVD-RWs can only be written by drives which support the respective standard.

DVD+R DL/DVD-R DL (Double Layer)

Abbreviation for Digital Versatile Disc Recordable Double Layer or Digital Video Disc Recordable Double Layer. A DVD+R DL or a DVD-R DL is an optical data storage medium that can only be written once with a maximum of 8.5 GBytes of data. Then these data cannot be changed, but can be read as often as desired.

DVD-R LF (with Label Flash support)

Abbreviation for Digital Versatile Disc Recordable Label Flash. A DVD-R LF is an optical data storage medium that can only be written once with a maximum of 4.7 GBytes of data. Then these data cannot be changed, but can be read as often as desired. This type of data carrier is suitable for direct labelling with Label Flash.

Handling CD/DVDs



Observe the following guidelines when handling CD/DVDs:

- Avoid touching the surface of a CD/DVD. Hold CDs/DVDs by their edges!
- Always store CDs/DVDs in their cases. This will protect them from dust, scratches and other damage.
- Protect your CDs/DVDs from dust, mechanical vibration and direct sunlight!
- Avoid storing a CD/DVD in areas subject to high temperatures or humidity.



In order to make use of the full recording speed of your drive, please use blank disks marked "Multispeed" or "High Speed"

CD/DVD drives (device-dependent)

Your notebook is delivered with a CD/DVD drive. Your notebook features a Multi-format DVD burner with double layer support.

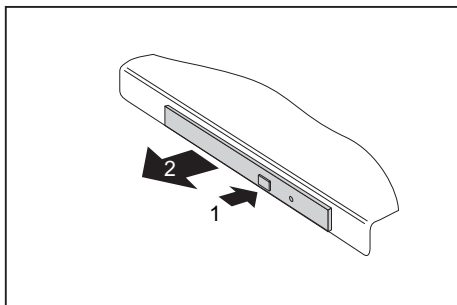
Please ask your local computer store for assistance if you are not sure which CD or DVD type suits best for your use case, e. g. backing up data, recording films, storing pictures etc.

Multi-format DVD burner with double layer support

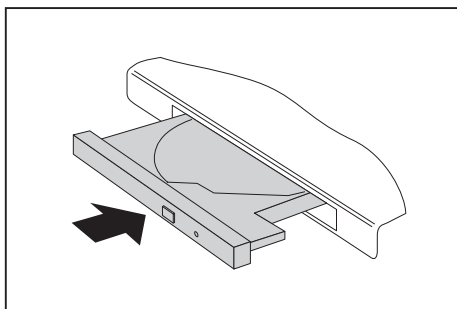
With the multi-format DVD burner with double layer support you can read all optical data storage media named above. You can also write CD-Rs, CD-RWs, DVD+Rs, DVD+RWs, DVD-Rs, DVD-RWs and DVD+R DLs.

Inserting or removing a CD/DVD

The notebook must be switched on.



- ▶ Push the insert/eject button (1).
- ↳ The drive tray will open.
- ▶ Gently pull the drive tray (2) completely out.



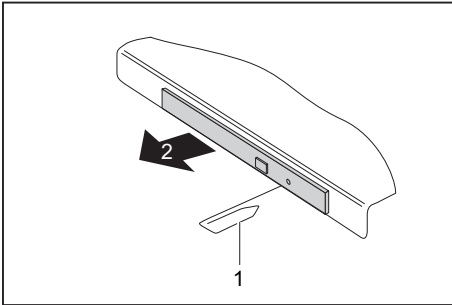
- ▶ Place the CD/DVD in the drive tray with the label facing upwards.

or

- ▶ Take out an inserted CD/DVD.
- ▶ Push in the drive tray until you feel it lock into place.

Removing the CD/DVD by hand (emergency removal)

In the event of a power failure or damage to the drive it may be necessary to manually remove the CD/DVD.



- ▶ Switch your notebook off.
- ▶ Push a pen or a piece of wire (such as a paperclip) firmly into the opening (1).
- ↳ The drive tray is ejected. You can now pull the drive tray (2) out of the drive.

Regional codes for DVD films and DVD players

DVD films and DVD players (e.g. the DVD drive of your notebook) are always provided with a regional code. The regional codes of DVD films and DVD players must match so that the DVD film can be played back.

There are six different regional codes:

- Regional code 1: USA and Canada
- Regional code 2: Egypt, Europe, Japan, South Africa and the Middle East
- Regional code 3: South-east Asia (incl. Hong Kong, Indonesia, the Philippines, South Korea, Taiwan)
- Regional code 4: Australia, New Zealand, South-East Pacific, Central and South America, and the Caribbean
- Regional code 5: Africa (except South Africa), India and the former Soviet states
- Regional code 6: China

The DVD drive of your notebook supports the function RPC-II (Phase II System of Regional Playback Control). This function permits the final user to change the regional code of the drive up to five times to play back corresponding DVD films. After this, the last regional code selected is retained and cannot be changed again.



If a DVD film can be watched in all regions, it has the regional code 0.

Before buying a DVD film you should check that the regional code of the DVD film matches the region code set for the DVD drive of your notebook.

Adjusting the AutoPlay function of your CD/DVD drive

Windows uses AutoPlay technology. This allows you to tell Windows what to do with different types of CD or DVD disks.

You can set the AutoPlay function of the CD/DVD drive according to your needs. For example, if you insert a music CD you can tell Windows to open Media Player and start to play it automatically.

Proceed as follows:

- Enter the settings by clicking *Start – (Settings) – Control Panel – Hardware and Sound – Autoplay*.



Please note that you must select the desired action for each individual CD/DVD content type.

Loudspeaker

Your notebook has two built-in stereo speakers.



When you connect headphones or external speakers, the built-in speakers are disabled.

Switching the loudspeaker on/off

- Use the key combination **Fn** + **F3** to switch the loudspeaker on/off.

Adjusting the volume

- Set the desired volume using the key combination **Fn** + **F4** or **Fn** + **F5**.

or

- Double-click on the speaker symbol in the taskbar and then on *Mixer*.

or

- Select *Start symbol – (Settings) – Control Panel – Hardware and Sound – Sound: Adjust system volume*.
- Use the slide control to change the volume.
- To turn the speaker on or off, double-click on the speaker symbol in the taskbar.

Radio componenets (Wireless LAN)



The installation of a wireless LAN module not approved by Fujitsu Siemens Computers GmbH voids the permits (CE marking) issued for this device.

Wireless LAN is integrated in your notebook.

Switching wireless LAN module on and off



Check whether the wireless LAN module is activated/deactivated in the installed wireless LAN software.

- Use the keyboard shortcut **Fn** + **F1** to switch the wireless LAN module on and off.
- ↳ The wireless LAN indicator lights up when the wireless LAN module is switched on.

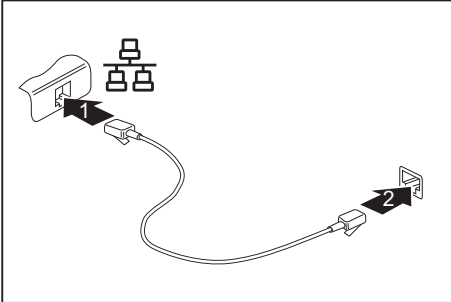


Pay attention to the additional safety notes for devices with radio components provided in the "Safety" manual.

Further information on using wireless LAN can be found in the help files (see ["Information sources", Page 5](#)).

Ethernet and LAN

The internal LAN module of your notebook supports Ethernet-LAN (10/100 Mbps). With the LAN module you can establish a connection to a local network (LAN = Local Area Network).



- ▶ Connect the LAN cable to the notebook's LAN connector (1).
- ▶ Connect the LAN cable to your network connector (2).



Your network administrator can help you to configure and use the LAN-connections.

The delivery scope does not include a LAN cable. These can be obtained through your retailer.

Security functions

Your notebook has several security features that you can use to secure your system from unauthorised access.

This chapter will explain how to use each function, and what the benefits are.



Please remember that in some cases, for example, forgetting your password, you can be locked out and unable to access your data. Therefore, please note the following information:

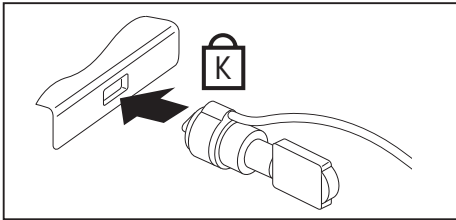
- Make regular backups to external storage devices such as external hard drives, CD or DVD disks.
- Some security functions need you to choose passwords. Make a note of the passwords and keep them in a safe place.

If you forget your passwords you will need to contact the help desk. Passwords are not covered by your warranty and a charge will be made for assistance.

Brief overview of security functions

Security functions	Type of protection	Preparation
Kensington Lock	Mechanically robust steel cable with lock	Fit and lock Kensington MicroSaver (optional accessory)
BIOS password protection	Password protection for <i>BIOS Setup Utility</i> and operating system with supervisor and user password.	Specify at least one supervisor password in the <i>BIOS Setup Utility</i> and activate the password protection for the operating system as desired.

Using Kensington Lock



- Fit the Kensington MicroSaver on the device on your notebook.

Configuring password protection in BIOS Setup Utility



Before using the various options for password protection in the *BIOS Setup utility* to increase data security, please observe the following:

Make a note of the passwords and keep them in a safe place. If you forget your supervisor password you will not be able to access your notebook. Passwords are not covered by your warranty and a charge will be made for assistance.



Your password can be up to eight characters long and contain letters and numbers. No distinction is made between uppercase and lowercase.

Protecting BIOS Setup Utility (supervisor and user password)



If you have opened these operating instructions on the screen, we recommend that you print out the following instructions. Because you cannot call the instructions onto the screen while you are setting up the password.

You prevent unauthorised use of the *BIOS Setup Utility* with both the supervisor and the user password. The supervisor password gives you access to all functions of the *BIOS Setup Utility*, while the user password only provides some of the functions. You can only set a user password if a supervisor password has already been assigned.



Please refer to the [""Settings in BIOS Setup Utility", Page 49](#) section for a description of how to call up and operate the *BIOS Setup Utility*.

Setting supervisor and user password

- ▶ Start the *BIOS Setup Utility* and go to the *Security* menu.
- ▶ Select the *Set Supervisor Password* field and press the Enter key.
- ↳ With *Enter new Password*: you are asked to enter a password.
- ▶ Enter the password and press the Enter key.
- ↳ *Confirm new Password* requires you to confirm the password.
- ▶ Enter the password again and press the Enter key.
- ↳ *Changes have been saved* is a confirmation that the new password has been saved.
- ▶ To set the user password, select *Set User Password* and proceed exactly as when configuring the supervisor password.
- ↳ If you do not want to make any other settings, you can exit *BIOS Setup Utility*.
- ▶ Select the *Save Changes and Exit* option in the *Exit* menu.
- ▶ Select *Yes* and press the Enter key.
- ↳ The notebook is rebooted and the new password is effective. If you now want to open the *BIOS Setup Utility*, you must first enter your supervisor or user password. Please note that the user password only provides access to a few of the BIOS settings.

Changing the supervisor or user password

You can only change the supervisor password when you have logged into the *BIOS Setup Utility* with the supervisor password.

- ▶ Call the *BIOS Setup Utility* and go to the *Security* menu.
- ▶ When changing the password, proceed exactly as for password assignment.

Removing passwords

To remove a password (without setting a new password) perform the following steps:

- ▶ Start the *BIOS Setup Utility* and go to the *Security* menu.
- ▶ Highlight the *Set Supervisor Password* or *Set User Password* field and press the Enter key.
- ↳ *Enter current Password* then requires you to enter the current password.
Enter new Password requires you to enter a new password.
- ▶ Press the Enter key twice.
- ▶ Select the *Save Changes and Exit* option in the *Exit* menu.
- ▶ Select *Yes* and press the Enter key.
- ↳ Your notebook will now restart and the password is removed.
Removing the supervisor password simultaneously deactivates the user password.

Password protection of operating system



With the supervisor password that you have set in the *BIOS Setup Utility* (see ["Setting supervisor and user password", Page 35](#) section), you can also prevent booting of the operating system.

Activating system protection

- ▶ Call the *BIOS Setup Utility* and go to the *Security* menu.
- ▶ Select the *Password on Boot* option and press the Enter key.
- ▶ Select *Enabled* and press the Enter key.
- ▶ Select the *Save Changes and Exit* option under *Exit*.
- ↳ The notebook restarts. You will be prompted to enter your password (the supervisor password).

Deactivating system protection

- ▶ Call the *BIOS Setup Utility* and go to the *Security* menu.
- ▶ Select the *Password on Boot* option and press the Enter key.
- ▶ Select *Disabled* and press the Enter key.
- ↳ If you do not want to make any other settings, you can exit *BIOS Setup Utility*.
- ▶ Select the *Save Changes and Exit* option under *Exit*.
- ↳ The notebook restarts. The system is no longer password-protected.

Connecting external devices



Always refer to the safety information provided in ["Important notes", Page 4](#) before connecting or disconnecting any devices to or from your notebook.

Always read the documentation supplied with the device you wish to connect.

Never connect or disconnect cables during a thunderstorm.

Never pull at a cable when disconnecting it. Always grasp the plug.

Follow the steps below in order, when connecting or disconnecting devices to your notebook:

Connecting devices to the notebook

1. Turn off your notebook and all external devices.
2. Unplug your notebook and all devices from the mains sockets.
3. Connect the cables for your external devices following the instructions.
4. Plug all power cables into the mains sockets.

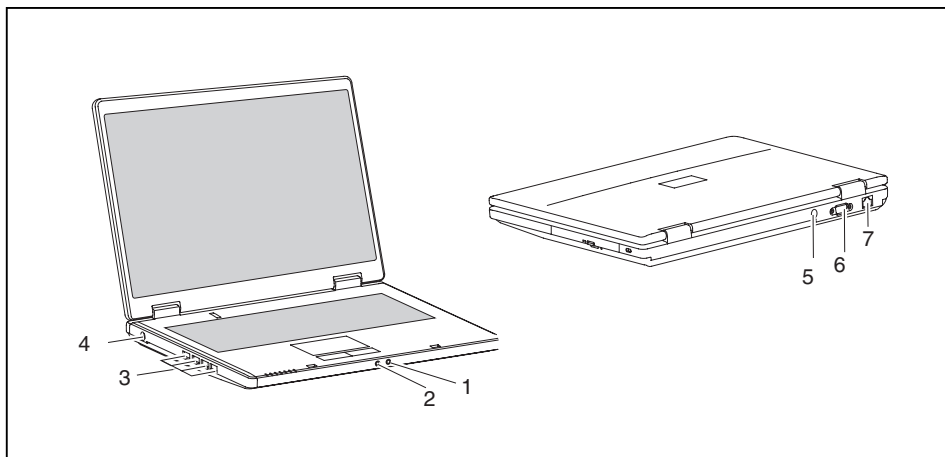
Disconnecting devices from the notebook

1. Turn off your notebook and all external devices.
2. Unplug your notebook and all devices from the mains sockets.
3. Disconnect the cables for your external devices following the instructions.



Some of the external devices require special drivers (see the operating system and external device documentation).

Ports

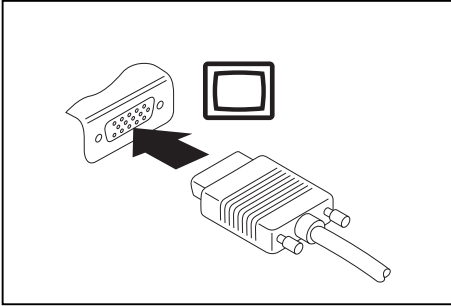


- 1 = Headphone socket / Line Out
- 2 = Microphone socket / Line In
- 3 = USB ports
- 4 = DC input jack (DC IN)

- 5 = S-Video out socket
- 6 = Monitor port
- 7 = LAN port

Connecting an external monitor

An external monitor can be connected to the notebook.



- ▶ Switch off the notebook and the external monitor.
- ▶ Connect the data cable of the external monitor to the monitor port of the notebook.
- ▶ First switch on the external monitor and then the notebook.



Using the **[Fn] + [F10]** key combination, you can toggle back and forth between the external monitor and the notebook's LCD screen.

You can display the same picture on the external monitor and the notebook LCD screen simultaneously.

Setting the refresh rate for your external monitor



If the refresh rate set is too high, the monitor may be damaged. Please see the documentation included with your monitor for the maximum possible refresh rate.

By setting the optimum refresh rate you will avoid screen flicker.

- ▶ Set the appropriate refresh rate for the connected monitor type.
- ▶ Select *Startsymbol – (Settings) – Control Panel – Appearance and Personalization – Personalization: Adjust screen resolution.*

or

- ▶ Right-click on the desktop. Under *Personalization – Display Settings*, choose screen type 1 or 2.
- ▶ Select *Advanced Settings – Monitor.*
- ▶ Select *Screen Refresh Rate* to choose the optimum refresh rate for the connected monitor type.
- ▶ Click *Apply* and *OK.*

Connecting USB devices

On the USB ports you can connect external devices that also have a USB port (e.g. a printer, a scanner or a modem).

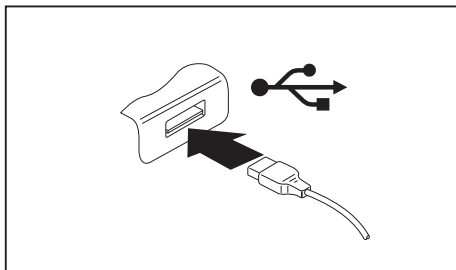


USB devices are hot-pluggable. This means you can connect and disconnect devices while your operating system is running.

USB 1.x has a maximum data transfer rate of 12 Mbit/s.

USB 2.x has a data transfer rate of up to 480 Mbit/s.

Additional information can be found in the documentation for the USB devices.



- ▶ Connect the data cable to the external device.
- ▶ Connect the data cable to a USB port of the notebook.



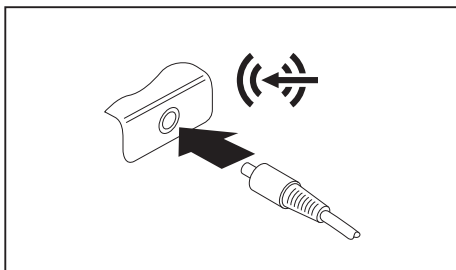
Device drivers

USB devices will be automatically recognised and installed by your operating system.

Connecting external audio devices

Microphone port / Line In

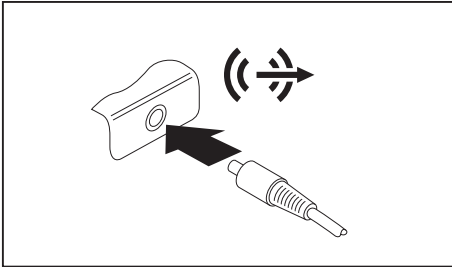
The microphone port/Line In allows you to connect an external microphone, a MiniDisc player, MP3 player, CD player or a tape deck to your notebook.



- ▶ Connect the data cable to the external device.
- ▶ Connect the data cable to the microphone port/Line In of the notebook.

Headphones port / Line out

You can connect either headphones or external loudspeakers to your notebook via the headphones connection.



- ▶ Connect the data cable to the external device.
- ▶ Connect the data cable to the Headphones/Line Out port of the notebook.



When you connect headphones or external loudspeakers, the built-in loudspeakers are disabled.

If you purchase a cable from a retailer, please note the following:

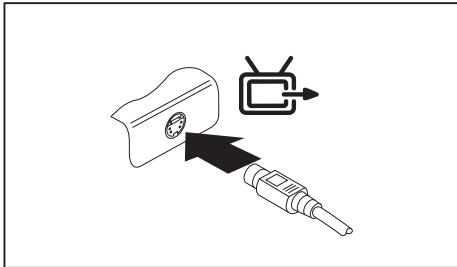
If you want to connect headphones or a speaker you will need a "3.5 mm jack plug".

Adjusting the volume

- ▶ To set the desired volume, see ["Adjusting the volume", Page 31](#).

Connecting an external device to S-Video Out

You can connect an external device (e.g. a TV) to the S-Video Out socket on your notebook to view films on DVD, photos or presentations etc.

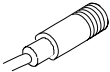
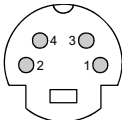


- ▶ Switch off the notebook and the external device.
- ▶ Connect the external device to the S-Video Out socket on your notebook.
- ▶ First switch the external device on and then the notebook.



If you purchase a cable from a retailer, please note the following information:

The S-Video Out socket on your notebook is a "4-pin Hosiden socket", also called a "4-pin mini DIN socket" The plug for this connection must be a "Hosiden connector".

Connectors	Port	Pin configuration	
		Position	Meaning
		1	Y earth
		2	C earth
		3	Y
		4	C

Activating the TV receiver



For computers with an ATI graphics card, use the *Catalyst® Control Center* ATI software for screen setting. The software includes integrated help for this application.

For computers with an NVIDIA graphics card, use the *NVIDIA Control Panel* software for screen setting. The software includes integrated help for this application.

- ▶ Connect an external device (e.g. a television set) to the S-Video Out socket on your notebook, and reboot the notebook.
 - or
 - ▶ Select *Startsymbol – (Settings) – Control Panel – Appearance and Personalization – Personalize – Display Settings – Advanced Settings*.
 - ▶ Select *OK*.
 - or
 - ▶ If your notebook has an ATI graphics card, select *Startsymbol – All Programs – Catalyst Control Center – Catalyst Control Center*.
 - or
 - ▶ If your computer has an NVIDIA graphics card, right-click on the desktop and select *NVIDIA Control Panel*.
- ↳ The image is transferred to the external device

Removing and installing components during servicing



Only qualified technicians should repair your notebook. Unauthorised opening or incorrect repair may greatly endanger the user (electric shock, fire risk) and will invalidate your warranty.

You may remove and install the components described in this chapter yourself after consulting the Hotline/Help Desk.



If you remove and install components without consulting the Hotline/Help Desk, then the warranty of your notebook will be voided.

Notes on installing and removing boards and components

- Switch the notebook off and pull the power plug out of the mains socket.
- Remove the battery.
- Take care when you use the locking mechanisms on the battery and any other component.
- Never use sharp objects such as screwdrivers, scissors or knives as leverage to remove covers.



Boards with electrostatic sensitive devices (ESD) are marked with the label shown.

When handling boards fitted with ESDs, you must always observe the following points:

- You must always discharge static build up (e.g. by touching a grounded object) before working.
- The equipment and tools you use must be free of static charges.
- Remove the power plug from the mains supply before inserting or removing boards containing ESDs.
- Always hold boards with ESDs by their edges.
- Never touch pins or conductors on boards fitted with ESDs.

Removing and installing the battery

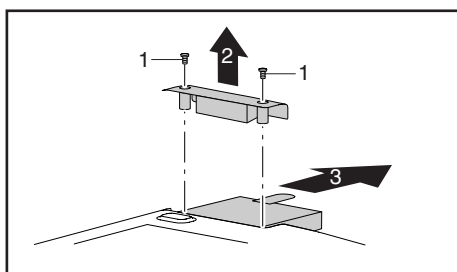


How to remove and reinstall a battery is described in the ["Removing and installing the battery", Page 24](#) chapter.

Removing and installing the hard disk

Removing the hard disk

- ▶ Switch the notebook off and pull the power plug out of the mains socket.
- ▶ Close the LCD screen so that it locks into place.
- ▶ Disconnect all cables connected to the notebook.
- ▶ Turn your notebook over and place it on a stable, flat and clean surface. If necessary, lay a non-slip cloth on this surface to prevent the notebook from being scratched.
- ▶ Remove the battery (see ["Removing the battery", Page 24](#)).



- ▶ Remove the screws (1).
- ▶ Lift the cover off the notebook in the direction of the arrow (2).
- ▶ Pull the hard disk out of the hard disk compartment in a straight line (3) along the guide rail.

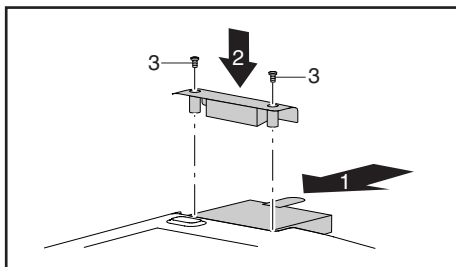
- ▶ Remove the 2 screws from the frame of the hard disk.
- ▶ Pull the hard disk out of the frame.

Installing the hard disk



When installing the hard disk, ensure that the contacts in the hard disk compartment do not bend or become damaged.

- ▶ Slide the hard disk into the frame.
- ▶ Secure the hard disk to the frame using the 2 screws.



- ▶ Insert the hard disk into the hard disk compartment (1) in a straight line.
- ▶ Push the hard disk into the hard disk compartment in a straight line until the contacts catch. Do not use excessive force when inserting the hard disk.
- ▶ Attach the cover in the direction of the arrow (2).
- ▶ Secure the cover with the screws (3).

- ▶ Install the battery again (see ["Inserting the battery", Page 24](#)).
- ▶ Turn the notebook the right way up and place it on a flat surface.
- ▶ Reconnect the cables that you disconnected previously.

Adding memory

Your notebook has 512 MB – 2 GB or 4 GB of main memory, depending on the upgrade level. The notebook will not start without memory modules, as no fixed RAM is installed.



Note that the 32-bit versions of Windows Vista can currently only deal with around 3GB of main memory.

Installing and removing the memory expansion modules

If you are asked by the Hotline/Help Desk to remove and install the memory expansion module yourself, proceed as follows:



Please observe the safety information in ["Important notes", Page 4](#).

The notebook must be switched off when installing/removing the memory modules, it must not be in Suspend mode.

Only use memory upgrades which are approved for your notebook. 512 MB, 1 GB and 2 GB modules DDR2-667 SO DIMM (PC2-5300).

Never use force when installing or removing memory modules.

Make sure that no foreign objects fall into the memory expansion compartment.

The memory modules are located in a larger service compartment. You must open the service compartment to remove or install a memory module. Once you have removed the cover, the various components are exposed. These components should be removed and replaced only by authorised specialists. Therefore, be sure to observe the following:

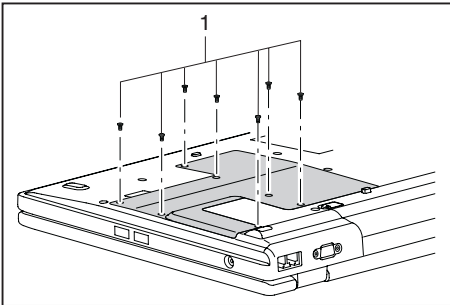


Individual components (e.g. the processor heat sink) can become very hot during operation. Therefore, we recommend that you wait one hour after switching off the notebook before removing or installing the memory modules. Otherwise, there is a risk of suffering burns!

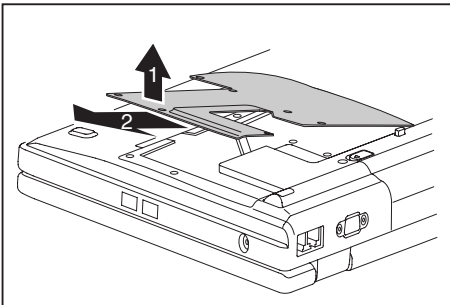
As some components with ESDs are exposed, please take note of ["Notes on installing and removing boards and components", Page 44](#).

- ▶ Switch your notebook off.
- ▶ Close the LCD screen so that it locks into place.
- ▶ Unplug the mains plug of the mains adapter from the mains socket.
- ▶ Disconnect all cables connected to the notebook.
- ▶ Turn your notebook over and place it on a stable, flat and clean surface. If necessary, lay a non-slip cloth on this surface to prevent the notebook from being scratched.
- ▶ Remove the battery (see ["Removing the battery", Page 24](#)).

Removing cover

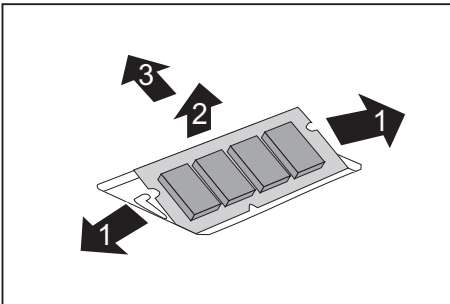


- Remove the screws (1).



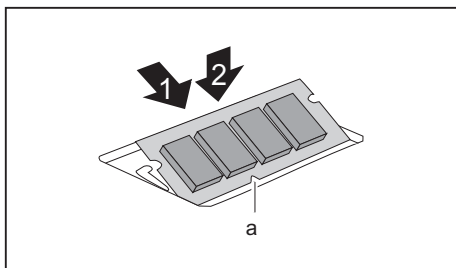
- Lift the cover up (1) and pull it in the direction of the arrow (2) from the notebook.

Removing memory modules



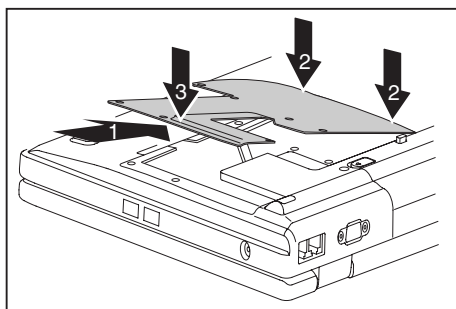
- Carefully push the two mounting clips outwards (1).
- ↳ The memory module snaps upwards (2).
- Pull the memory module out of its slot in the direction of the arrow (3).

Installing a memory module

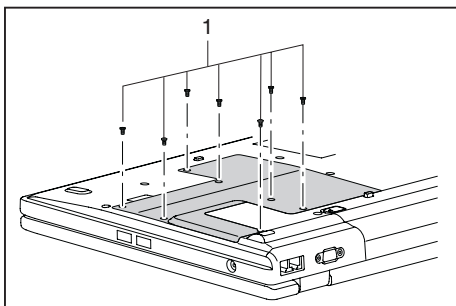


- Insert the memory module with the contacts and the recess (a) facing the slot (1).
- Carefully push the memory module downwards until you feel it click into place (2).

Attaching the cover



- Insert the cover in the groove (2) in the direction of the arrow (1) and fold the cover shut (3).



- Secure the cover with the screws (1).

- Install the battery again (see ["Inserting the battery", Page 24](#)).
- Turn the notebook the right way up and place it on a flat surface.
- Reconnect the cables that you disconnected previously.

Settings in BIOS Setup Utility

BIOS Setup Utility allows you to set the system functions and the hardware configuration of the notebook.

When it is delivered, the notebook is set to factory default settings. You can change these settings in *BIOS Setup Utility*. Any changes you make take effect as soon as you save and exit the *BIOS Setup Utility*.

The *BIOS Setup Utility* program contains the following menus:

<i>Information</i>	For system information such as BIOS version, processor and notebook identification
<i>Main</i>	For system settings such as time, date and notebook information
<i>Advanced</i>	Advanced system settings
<i>Security</i>	Password settings and security functions
<i>Boot</i>	Configuration of the start-up sequence
<i>Exit</i>	Exits the <i>BIOS Setup Utility</i>

Starting the BIOS Setup Utility

- ▶ Reboot the notebook (switch off/on or reboot the operating system).
- ↳ The following or a similar display appears on the screen at start-up:
 <F2> BIOS Setup <F12> Boot Menu
- ▶ When this message appears, press the function key **[F2]**.
- ▶ If a password has been assigned, enter the password and press enter.



If you have forgotten the password, contact your system administrator or contact our customer service centre.

Operating BIOS Setup Utility



Press the **[F1]** key to display help on the operation of *BIOS Setup Utility*. The description of the individual settings is shown in the right-hand window of the *BIOS Setup Utility*.

With the **[F9]** key you can load the default settings of the *BIOS Setup Utility*.

- ▶ Use the cursor keys **[←]** or **[→]** to select the menu you wish to access to make changes.
- ↳ The menu is displayed on the screen.
- ▶ Select the option you want to change with the cursor keys **[↑]** or **[↓]**.
- ▶ Press the Enter key.
- ▶ Press the **[ESC]** key to exit the selected menu.
- ▶ For future reference, make a note of the changes you have made (for example, in this manual).

Exiting BIOS Setup Utility

You need to select the desired option in the *Exit* menu and activate it by pressing the Enter key.

Exit Saving Changes – Save settings and exit BIOS Setup Utility

- ▶ To save the current menu settings and exit the *BIOS Setup Utility*, select *Exit Saving Changes* and *OK* or *Yes*.
- ↳ The notebook is rebooted and the new settings come into effect.

Exit Discarding Changes – Reject changes and exit BIOS Setup Utility

- ▶ To ignore the changes you have made, select *Exit Discarding Changes*.
- ↳ The settings in place when *BIOS Setup Utility* was called remain effective. *BIOS Setup Utility* is terminated and the notebook is rebooted.

Load Setup Default – Copy default values

- ▶ To reset all menus in the *BIOS Setup Utility* to use default entries, select *Load Setup Default* and *OK* or *Yes*.

Discard Changes – Discard changes without exiting BIOS Setup Utility

- ▶ To discard the changes you have made, select *Discard Changes* and *OK* or *Yes*.
- ↳ The settings in place when *BIOS Setup Utility* was called remain effective.
You can now make additional settings in the *BIOS Setup Utility*.
- ▶ To exit the *BIOS Setup Utility* with these settings, select *Exit Saving Changes* and *OK* or *Yes*.

Troubleshooting and tips



Refer to the safety information in the "Safety" manual when connecting or disconnecting cables.

If a fault occurs, try to correct it as described. If you fail to correct the problem, proceed as follows:

- ▶ Make a note of the steps and the circumstances that led to the fault. Also make a note of any error messages displayed.
- ▶ Switch the notebook off.
- ▶ Contact the Hotline/Help Desk.



You can find the telephone numbers in the help desk list. Please have the following information ready when you call:

- The model name and serial number of the notebook. The serial number is located on a sticker on the underside of the notebook.
- Notes of any messages that appear on the screen and information on acoustic signals.
- Any changes you have made to the hardware or software since receiving the notebook.
- Any changes you have made to the *BIOS Setup* settings since receiving the notebook.
- Your system configuration and all peripheral devices connected to your system.
- Your sales contract.



Our notebooks have been designed primarily with mobile applications in mind. This means that considerable effort has been made to optimise components and equipment in terms of weight, space and energy requirements. Depending on the particular configuration you have purchased, it is possible that functionality may be slightly reduced compared to a desktop PC if you are running processor-intensive gaming software, e.g. games with intensive 3D graphics. Updating your hardware with drivers which have not been approved by Fujitsu Siemens Computers may result in performance losses, data losses or malfunction of the equipment. A list of approved drivers and current BIOS versions can be downloaded from: ["http://www.fujitsu-siemens.de/support/downloads.html"](http://www.fujitsu-siemens.de/support/downloads.html)

Restoring installed software



Please create backup copies of your files on a regular basis. If data is lost, you can restore your applications using the data carriers. However, if you do not have backup copies of your own data files, it is no longer possible to restore them.

If your operating system will not start, or if there are errors on the hard disk, the pre-installed software may have to be re-installed.

Restoring the operating system, drivers, manuals and special software

You can find information on how to restore the operating system, drivers, manuals and special software in the "Recovery Process" manual.

The notebook's date or time is incorrect

Cause	Troubleshooting
Time and date are incorrect.	► With the <i>BIOS-Setup-Utility</i> , you can set the date and time in the <i>main</i> menu.



If the date and time are repeatedly incorrect when you switch on the notebook, the built-in battery that supplies the internal clock has failed.

- Please contact your sales outlet or our hotline/help desk.

The notebook's LCD screen remains blank

Cause	Troubleshooting
Monitor is switched off.	► Press a key or enter the password
External monitor or television set connected.	► Press the key combination Fn + F10 (switch screen output).

The LCD screen is difficult to read

Cause	Troubleshooting
Reflected glare	► Turn the notebook or alter the tilt of the LCD screen.

The external monitor remains blank

Cause	Troubleshooting
Monitor is switched off.	► Switch the external monitor on.
Power saving has been activated (monitor is blank).	► Press any key to continue.
Brightness is set to dark.	► Adjust the brightness of the monitor.
Screen output is set to the notebook's LCD screen	► Press the key combination [Fn] + [F10] (switch screen output).
The external monitor's power cable or data cable is not connected properly.	<ul style="list-style-type: none"> ► Switch off the external monitor and the notebook. ► Check whether the power cable is plugged properly into the external monitor and into the power socket. ► Check whether the data cable is properly connected to the notebook and the external monitor (if it is plugged in with a connector). ► Switch on the external monitor and the notebook.

The external monitor is blank or the image is unstable

Cause	Troubleshooting
The wrong external monitor has been selected or the wrong screen resolution has been set for the application program.	<ul style="list-style-type: none"> ► Terminate the application program in Windows by pressing [Alt] + [F4]. If the fault persists after closing the program, switch over to the notebook's internal LCD screen with [Fn] + [F10]. Change the following setting: ► Set the screen resolution: Select the required resolution with <i>Startsymbol – (Settings) – Control Panel – Appearance and Personalization – Personalization: Adjust the screen resolution as required.</i> ► Select monitor: Right-click on the desktop. Under <i>Personalization – Display Settings</i> choose monitor 1 or 2 and under <i>Advanced Settings – Monitor</i> choose the correct monitor.

The notebook stops working

Cause	Troubleshooting
Notebook is in energy saving mode.	► Leave energy saving mode.
An application programme has caused the malfunction.	► Close the application program or restart the notebook by switching it on/off or with a warm boot.
The battery is dead.	► Charge the battery. or ► Install a charged battery. or ► Connect the mains adapter to the notebook.

The printer does not print

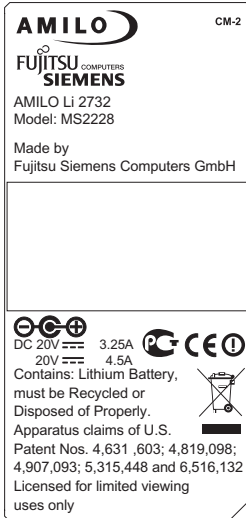
Cause	Troubleshooting
The printer is not switched on.	► Make sure that the printer is switched on and is online (see the manuals supplied with the printer).
The printer is not connected correctly.	► Check that the cable connecting the notebook and the printer is connected properly.
The printer driver is faulty or not correctly installed, or it is the wrong printer driver.	► Check that the cable connecting the notebook and the printer is connected properly. ► Check whether the correct printer driver is loaded (see printer documentation).

The radio connection to a network does not work

Cause	Troubleshooting
The wireless component is disabled.	► Switch the radio components on (see "Switching wireless LAN module on and off", Page 32).
The wireless component is enabled. Despite this, the wireless connection to a network does not work.	► Check whether the radio connection is switched on via the software. ► Further information on using the wireless component can be found in the help files (see "Information sources", Page 5).

Technical data


To find the correct technical data for your device, see the device information plate. The device information plate is located on the underside of the device.



Type designation (e.g. AMILO Li 2732)

Notebook

Environmental conditions	
Environmental class	3K2
Temperature	
Operating (3K2)	5 °C – 35 °C
Transportation (2K2)	15 °C – 60 °C
Dimensions	
Width x Depth x Height (front/back)	355 mm x 255.8 mm x 24/34 mm
Weight (depending on configuration)	approx. 2.7 kg




The data sheet of this notebook contains further technical data. The data sheet can be found on your notebook, or alternatively it is also available to download from the Internet at ["www.fujitsu-siemens.com"](http://www.fujitsu-siemens.com).

Battery

	3-cell rechargeable battery	6-cell rechargeable battery
Charging time (when not in operation)	approx. 2.1 hours	approx. 2.2 hours
Operating time	approx. 1 hour	Device-specific approx. 2.3 hours or 3.25 hours

Mains adaptor 65W or 90W

Electrical data		
Primary	65W	90W
Rated voltage	100 V or 240 V (automatic)	
	50 Hz or 60 Hz (automatic)	
Subsystem		
Rated voltage	20 V	20 V
Max. rated current	3.25 A	4.5 A



Two different mains adapters are available for this device. Please use only the mains adaptor that was supplied with your device.

You can readily order an additional mains adaptor and an additional power cable.

Manufacturer's information

Disposal and recycling

You can find information on this subject on your notebook or on the "Drivers & Utilities" CD/DVD or on our website.

Declarations of Conformity

The "Declarations of Conformity" concerning the AMILO can be found at our Internet address: ["www.fujitsu-siemens.com"](http://www.fujitsu-siemens.com).

Hereby, Fujitsu Siemens Computers, declares that the AMILO is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

Copyright-protected technology

This product incorporates copyright protection technology that is protected by method claims of certain U. S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorised by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorised by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

CE marking



CE marking for devices without wireless component supplied between 16.01.2007 and 19.07.2007

The shipped version of this device complies with the requirements of EEC directives 89/336/EEC "Electromagnetic compatibility" and 2006/95/EC "Low voltage directive".

CE marking for devices without wireless component supplied at launch from 20.07.2007

The shipped version of this device complies with the requirements of EEC directives 2004/108/EC "Electromagnetic compatibility" and 2006/95/EC "Low voltage directive".



CE marking for devices with radio component

This equipment complies with the requirements of Directive 1999/5/EC of the European Parliament and Commission from 9 March, 1999 governing Radio and Telecommunications Equipment and mutual recognition of conformity.

This equipment can be used in the following countries:

Belgium	Bulgaria	Denmark	Germany
Estonia	Finland	France	Greece
UK	Ireland	Iceland	Italy
Latvia	Liechtenstein	Lithuania	Luxembourg
Malta	Netherlands	Norway	Austria
Poland	Portugal	Romania	Sweden
Switzerland	Slovakia	Slovenia	Spain
Czech Republic	Hungary	Cyprus	

Contact the corresponding government office in the respective country for current information on possible operating restrictions. If your country is not included in the list, then please contact the corresponding supervisory authority as to whether the use of this product is permitted in your country.

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